

## **ALUMINUM OXIDE CERAMIC COMPONENTS AND METHODS**

### **ABSTRACT OF THE DISCLOSURE**

A method for making an aluminum oxide ( $\text{Al}_2\text{O}_3$ ) component utilizes an amount of aluminum oxide in particle form. The aluminum oxide initially has less than about 100 parts per million of sodium and less than about 600 parts per million of silica. The aluminum oxide is ground with media that comprise aluminum oxide ceramic pieces that have less than about 200 parts per million of sodium to deagglomerate and reduce the particle size of the aluminum oxide. The ground aluminum oxide is placed into a slurry, and a low sodium grade binder is added to the slurry. The slurry is dried to provide an aluminum oxide powder having a sodium content that is less than about 200 parts per million. The powder may then be formed into a certain shape and thermally treated to produce an aluminum oxide component having a low sodium and low silica content.

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